



Product Brief: Intel® NUC Mini PCs

INTEL® NUC 8 HOME

NUC8i3BEHFA



The Shape that Fits the Future.



INTEL® NUC: THINK YOU KNOW WHAT SMALL CAN DO? THINK AGAIN.

Get ready for spectacularly responsive performance from the Intel® NUC Mini PC with an 8th gen Intel® Core™ i3 processor, 16 GB of Intel® Optane™ memory, Windows® 10, and a 1 TB HDD. The Intel NUC Mini PC is perfect for working on presentations, word processing, or streaming media—in a size that fits easily into any lifestyle and any room in the house.

Dual-core 8th generation Intel® Core™ i3 processor and Intel® Optane™ memory for serious multitasking

The Intel® NUC8i3BEHFA Mini PC with a true dual-core 8th gen Intel Core i3 processor delivers a big jump in performance compared to the previous generation. Whether it's used for a new home PC or a system with 4K UHD graphics for picture perfect entertainment, the NUC8i3BEHFA Mini PC gives great visual immersion with Iris® Plus Graphics 655 and the unprecedented performance of an Intel® Core™ processor.

The chassis has a 1 TB 2.5" HDD to store massive amounts of data and comes with 16 GB of Intel Optane memory—which is expandable to 32 GB. By coupling an HDD and Intel Optane memory, performance improves dramatically with up to 1.4x^{1,2} faster media loading. There's also 4 GB of DDR4 RAM and is expandable to 32 GB. In addition, far-field, dual-mics allow you to add digital assistant software or utilize Cortana to handle simple tasks.

Work Like a Boss with Thunderbolt™ 3, USB 3.1, and 4K Ultra HD

The Intel® NUC Mini PC is a connectivity powerhouse. It comes with Thunderbolt™ 3 which supports up to 40 GBps of data transfer and four USB 3.1 ports. The NUC8i3BEHFA supports triple displays all in 4K Ultra HD—with an HDMI* 2.0a port and DisplayPort* 1.2 via USB-C—so images or work can show across three screens without losing fidelity.

Think you know what small can do? Think again.

In a footprint that's almost zero—especially when compared with a tower—the NUC8i3BEHFA Mini PC has the performance and features of a desktop PC in a device that fits in the palm of your hand. The small size means the system can be placed almost anywhere—from behind a display to tucked discretely in an entertainment center. And with improved cooling, fan noise is minimal—which means a quieter experience no matter where the PC is positioned.

The Intel® NUC: who says small isn't powerful?

POWER, CAPABILITIES, AND PERFORMANCE IN A NEAR-ZERO FOOTPRINT

Highlighted Features

- 8th gen Intel® Core™ i3-8109U processor
- 4 GB DDR4 SO-DIMM
- 1 TB SATA3 2.5" HDD
- 16 GB Intel® Optane™ memory
- Windows® 10 Home
- Iris® Plus graphics 655
- Intel® Dual Band Wireless-AC 9560 and Bluetooth* 5.0
- Back panel DC power connector (12–19V)
- HDMI* 2.0a display port supporting 8 channel audio (7.1 surround sound)
- Intel® Gigabit LAN
- Two USB 3.1 ports on the back panel
- Thunderbolt™ 3 USB Type-C port providing DisplayPort* 1.2 or USB 3.1 Gen 2
- Kensington lock support
- Support for user-replaceable third-party lids
- Micro SD card slot
- Consumer infrared sensor
- Two USB 3.1 ports (including one charging port) on the front panel
- Front panel headphone/microphone jack
- Front panel power button
- Dual-array front microphones



INTEL® NUC KIT NUC8i3BEHFA

Technical Specifications

Processor

- Intel® Core™ i3-8109U processor (3.0-3.6 GHz, dual core, 4 MB cache, 28W TDP)

Operating System

- Windows® 10 Home

Graphics

- Iris® Plus Graphics 655
- HDMI* 2.0a port with 4K at 60 Hz
- USB Type-C port with DisplayPort* 1.2

System Memory

- 4 GB DDR4-2400 SO-DIMM (expandable to 32 GB), 1.2V

Intel® Optane™ Memory

- 16 GB in an M.2 slot

Storage Capabilities

- Micro SDXC slot with UHS-I support on the side
- One M.2 connector supporting 22x42 or 22x80 SSD (pre-populated with Intel Optane Memory module)
- 1 TB SATA3 HDD

Peripheral Connectivity

- Intel® Gigabit LAN port
- Thunderbolt™ 3 port
- Four USB 3.1 ports (two back panel ports and two front ports including one charging port)
- Intel® Dual Band Wireless-AC 9560 (802.11ac), 2x2, up to 1.73 Gbps
- Dual Mode Bluetooth* 5.0

System Bios

- 64 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V3.0b, SMBIOS2.5
- Intel® Visual BIOS

Hardware Management Features

- Processor fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- ACPI-compliant power management control

Expansion Capabilities

- Two Internal USB 2.0 ports via two 1x4 headers (for replaceable lid support)
- One Consumer Electronics Control header

Audio

- Up to 7.1 surround audio via HDMI*
- Headphone/microphone jack on the front panel
- Dual-array microphones on the front panel

Front Panel Header

- Reset, HDD LED, power LEDs, power on/off

Mechanical Chassis Size

- 4.60" x 4.40" x 2.01"
- 117 mm x 112 mm x 51 mm

Baseboard Power Requirements

- 19V, 90W power brick

Environment Operating Temperature

- 0° C to +35° C

Storage Temperature

- 20° C to +40° C

Safety Regulations and Standards

- IEC/EN/UL 60950-1
- IEC/EN/UL 62368-1

EMC/RF Regulations and Standards

- FCC Part 15B/15C/15E
- CISPR/EN 55032/55024
- ICES-003

- VCCI 32
- BSMI CNS 13438
- KN 32/35
- AS/NZS CISPR 32
- EN 300 328
- EN 301 893
- EN 300 440
- EN 301 489-1/3/17
- EN 62311
- AS/NZS 4268
- AS/NZS 2772.2
- ARPANSA

Environmental Regulations

- EU RoHS
- China RoHS
- Taiwan BSMI RoHS
- REACH

¹ Benchmark results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as "Spectre" and "Meltdown". Implementation of these updates may make these results inapplicable to your device or system.

² As measured by Media Project Load Workload comparing 8th Gen Intel® Core™ i7-8750H processor (32 GB Intel® Optane™ memory module) + 256 GB PCIe* SSD + 1 TB HDD vs. 8th Gen Intel Core i7-8750H processor + 256 GB PCIe SSD + 1 TB HDD.

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Actual Intel® NUC kit may differ from the image shown.

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